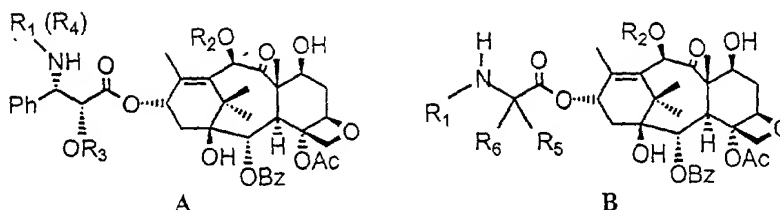


# CLAIMS

We claim:

1. Anti-neoplastic and/or anti-leukemic effective compound selected from the formulae A and B:



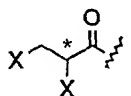
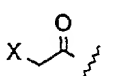
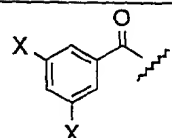
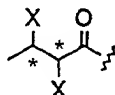
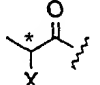
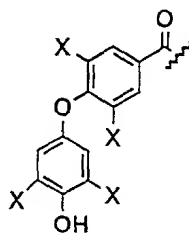
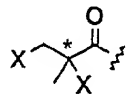
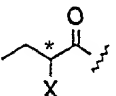
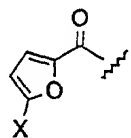
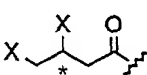
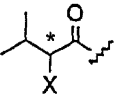
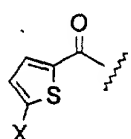
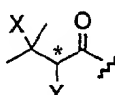
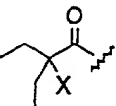
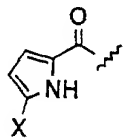
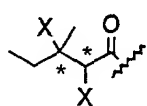
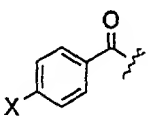
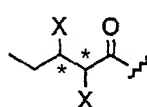
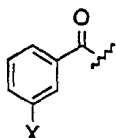
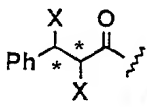
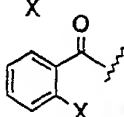
wherein

for general formula A: wherein R<sub>1</sub> is mono or dihalogenated acyl group, aroyl group (Table 1), alkyloxy-carbonyl group or aryloxy-carbonyl group (Table 2) and R<sub>3</sub> is hydrogen or halogenated group, and R<sub>2</sub> is hydrogen or acetyl groups; wherein R<sub>4</sub> is PhCO or Me<sub>3</sub>COCO or CH<sub>3</sub>CH=C(CH<sub>3</sub>)CH=(CH<sub>3</sub>)CO, R<sub>3</sub> is a halogenated group (Tables 1 and 2);

for general formula B: wherein R<sub>1</sub> is mono or dihalogenated acyl group or aroyl group (Table 1), alkyloxy-carbonyl group or aryloxy-carbonyl group (Table 2) and R<sub>2</sub> is hydrogen or acetyl group, and R<sub>5</sub> is any group from Table 3; R<sub>6</sub> is H or Me;

and wherein groups of Tables 1, 2 and 3 are selected from

Table 1 Structures of Halogenated Acyl and Aroyl Groups

Group 1		Group 9		Group 17	
Group 2		Group 10		Group 18	
Group 3		Group 11		Group 19	
Group 4		Group 12		Group 20	
Group 5		Group 13		Group 21	
Group 6		Group 14			
Group 7		Group 15			
Group 8		Group 16			

X: halogen (Cl or Br or I or F)

Table 1 (Contd)

Group 22		Group 29		Group 35	
Group 23		Group 30		Group 36	
Group 24		Group 31		Group 37	
Group 25		Group 32		Group 38	
Group 26		Group 33		Group 39	
Group 27		Group 34		Group 40	
Group 28					

X: halogen (Cl or Br or I or F)  
X<sub>1</sub>: one type of halogen  
X<sub>2</sub>: other type of halogen

Table 2 Structures of Halogenated Alkyloxy- and Aryloxy- Carbonyl Groups

Group 41		Group 48		Group 55	
Group 42		Group 49		Group 56	
Group 43		Group 50		Group 57	
Group 44		Group 51		Group 58	
Group 45		Group 52		Group 59	
Group 46		Group 53		Group 60	
Group 47		Group 54		Group 61	

X: halogen (Cl or Br or I or F)

X<sub>1</sub>: one type of halogenX<sub>2</sub>: other type of halogen

Table 2 (Contd)

Group 62		Group 68		Group 74	
Group 63		Group 69		Group 75	
Group 64		Group 70		Group 76	
Group 65		Group 71		Group 77	
Group 66		Group 72		Group 78	
Group 67		Group 73		Group 79	


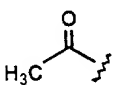

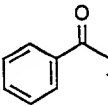
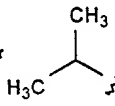
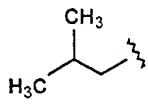
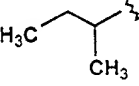
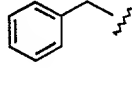
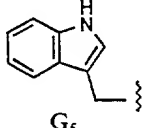
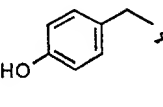
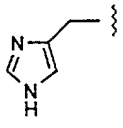
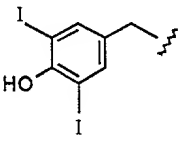
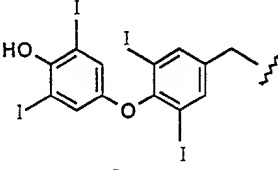

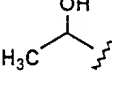
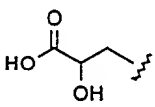
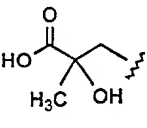
X: halogen (Cl or Br or I or F)  
X<sub>1</sub>: one type of halogen  
X<sub>2</sub>: other type of halogen

Table 2 (Contd)

Group 80		Group 86		Group 91	
Group 81		Group 87		Group 92	
Group 82		Group 88		Group 93	
Group 83		Group 89		Group 94	
Group 84		Group 90		Group 95	
Group 85					

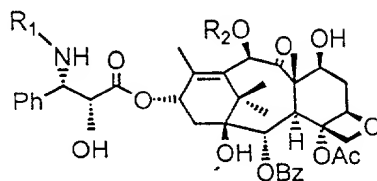
X: halogen (Cl or Br or I or F)

**Table 3.** Group Structures of Amino Acids and Their Codes Used in This Patent

					
Me	Ac	Ph	Bz	G <sub>1</sub>	G <sub>2</sub>
					
G <sub>3</sub>	G <sub>4</sub>	G <sub>5</sub>	G <sub>6</sub>	G <sub>7</sub>	
					
G <sub>8</sub>	G <sub>9</sub>	G <sub>10</sub>	G <sub>11</sub>		
					
G <sub>12</sub>	G <sub>13</sub>				

2. A compound of claim 1 of the formula:

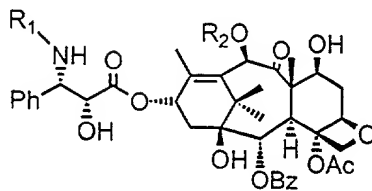
**TYPE I**



wherein  $R_1$  is a group selected from Table 1 (groups 1 to 40);  
and  $R_2$  is H or Ac;

3. A compound of claim 1 of the formula:

**TYPE II**

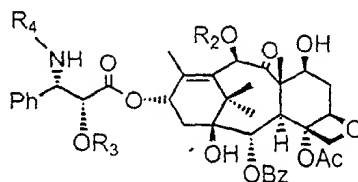


wherein  $R_1$  is a group selected from Table 2 (groups 41 to 95);  
 $R_2$  is H or Ac;



4. A compound of claim 1 of the formula:

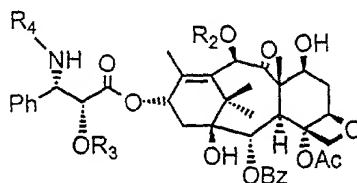
TYPE III



wherein  $R_3$  is a group selected from Table 1 (groups 1 to 40);  
and  $R_2$  is H or Ac, and  $R_4$  is PhCO or  $\text{Me}_3\text{COCO}$  or  $\text{CH}_3\text{CH}=\text{C}(\text{CH}_3)\text{CO}$ ;

5. A compound of claim 1 of the formula:

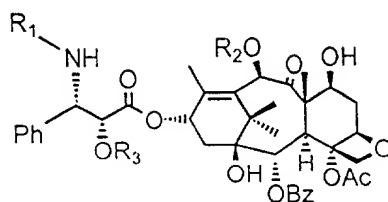
TYPE IV



wherein  $R_3$  is a group selected from Table 2, (groups 41 to 95),  
 $R_2$  is Ac or H, and  $R_4$  is PhCO or  $\text{Me}_3\text{COCO}$  or  $\text{CH}_3\text{CH}=\text{C}(\text{CH}_3)\text{CO}$ ;

6. A compound of claim 1 of the formula:

TYPE V



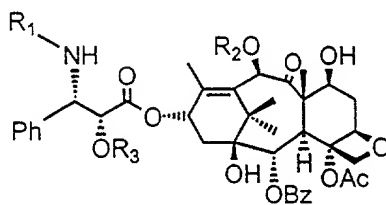
wherein  $R_1$  is a group selected from Table 1 (groups 1 to 40);

$R_2$  is H or Ac;

$R_3$  is a group selected from Table 2 (groups 41 to 95);

7. A compound of claim 1 of the formula:

TYPE VI



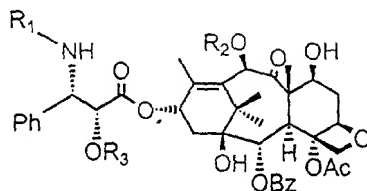
wherein  $R_1$  is a group selected from Table 2 (groups 41 to 95);

$R_2$  is H or Ac;

$R_3$  is a group selected from Table 1 (groups 1 to 40);

8. A compound of claim 1 of the formula:

TYPE VII



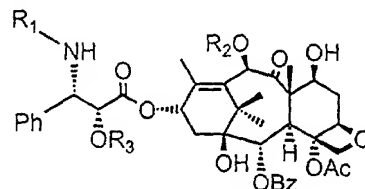
wherein  $R_1$  is a group selected from Table 1 (groups 1 to 40);

$R_2$  is H or Ac;

$R_3$  is a group selected from Table 1 (groups 1 to 40);

9. A compound of claim 1 of the formula:

TYPE VIII



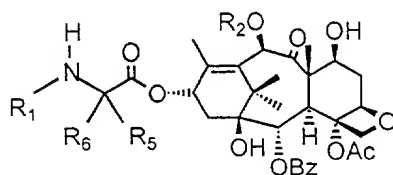
wherein  $R_1$  is a group from Table 2 (groups 41 to 95);

$R_2$  is H or Ac;

$R_3$  is a group selected from Table 2 (groups 41 to 95);

10. A compound of claim 1 of the formula:

TYPE IX



wherein  $R_1$  is a group selected from Table 1 (groups 1 to 40);

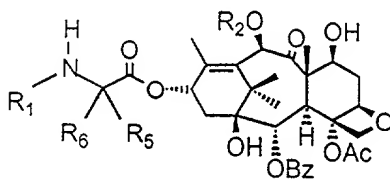
$R_2$  is H or Ac;

$R_5$  is H or Me or  $G_1$  or  $G_2$  or  $G_3$  or  $G_4$  or  $G_5$  or  $G_6$  or  $G_7$  or  $G_8$  or  $G_9$  or  $G_{11}$  or  $G_{12}$  or  $G_{13}$ ;

$R_6$  is H, only in the case when  $R_5$  is  $G_{10}$  the group  $R_6$  is H or Me;

11. A compound of claim 1 of the formula:

TYPE X



wherein  $R_1$  is a group selected from Table 2 (groups 55 to 95);

$R_2$  is H or Ac;

$R_5$  is H or Me or  $G_1$  or  $G_2$  or  $G_3$  or  $G_4$  or  $G_5$  or  $G_6$  or  $G_7$  or  $G_8$  or  $G_9$  or  $G_{11}$  or  $G_{12}$  or  $G_{13}$ ;

$R_6$  is H, only in the case when  $R_5$  is  $G_{10}$  the group  $R_6$  is H or Me;

12. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 1 or a pharmaceutically acceptable salt thereof.

13. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 2 or a pharmaceutically acceptable salt thereof.

14. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 3 or a pharmaceutically acceptable salt thereof.

15. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 4 or a pharmaceutically acceptable salt thereof.

16. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 5 or a pharmaceutically acceptable salt thereof.

17. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 6 or a pharmaceutically acceptable salt thereof.

18. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 7 or a pharmaceutically acceptable salt thereof.

19. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 8 or a pharmaceutically acceptable salt thereof.

20. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 9 or a pharmaceutically acceptable salt thereof.

21. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 10 or a pharmaceutically acceptable salt thereof.

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22. A pharmaceutical formulation which comprises as an active ingredient a compound of claim 11 or a pharmaceutically acceptable salt thereof.

23. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 1.

24. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 2.

25. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 3.

26. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 4.

27. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 5.

28. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 6.

29. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 7.

30. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 8.

31. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 9.

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32. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 10.

33. A method for treating humans in need thereof comprising administering to said humans an anti-cancer or anti-leukemic effective amount of the compound of claim 11.

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